ABSTRACT OF THE DISCLOSURE

[0225] A digital switching system comprises: (a) a line card layer containing a plurality of real or virtual line cards; (b) a switch card layer containing a plurality of real or virtual switch cards; and (c) an interface layer interposed between the line card layer and the switch card layer for providing serialization support services so that one or more of the line cards and switch cards can be operatively and conveniently disposed in a first shelf or on a first backplane that is spaced apart from a second shelf or from a second backplane supporting others of the line cards and/or switch cards. Such an arrangement allows for scalable expansion of the switching system in terms of number of lines served and/or transmission rates served. The flexibility of the system is owed in part to payload data being carried within payload-carrying regions of so-called ZCell signals as the payload data moves between the line card layer and the switch fabric layer.